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LEGISLATIVE AUDIT DIVISION



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MEMORANDUM

TO: Legislative Audit Committee Members

FROM: Jim Pellegrini, Deputy Legislative Auditor, Performance Audits *JP*

DATE: May 1999

RE: Follow-Up to Performance Audit: Administration of Consultant Design Projects at the Montana Department of Transportation (96P-07)

INTRODUCTION

On December 19, 1996, we presented our performance audit on the Administration of Consultant Design Projects to the Legislative Audit Committee. The audit was completed at the request of the Montana Department of Transportation. The report made seven recommendations to the department. We requested and received information from the department on their progress in implementing the recommendations in January of 1998 and again in January of 1999. In early 1999, we also interviewed department officials and staff, reviewed changes to written policies and forms, and reviewed a sample of consultant design project files to further examine implementation status.

This memorandum summarizes information on the implementation status of the recommendations made in the original report.

BACKGROUND ON CONSULTANT DESIGN

The Department of Transportation uses consultants to provide a variety of services such as road design, surveying, and environmental studies. Our 1996 audit focused on consultant designed road projects and the process used by the department to award and monitor these contracted services. Consultant projects are administered by the department's Consultant Design Section (CDS) which is supervised by the Consultant Design Engineer. The CDS develops Requests-For-Proposals, selects consultants, negotiates consultant contracts, and monitors designs to ensure contract requirements are met and designs progress as scheduled. Consultant design projects are monitored by four project engineers within the section. The project engineers are responsible for coordinating the interface between various department units and the consultants. For example, the department may provide survey or other information to the consultant for a particular project.

The department also reviews and approves various consultant reports on the project prior to completion of the design.

SUMMARY OF FOLLOW-UP RESULTS

The following table shows the status of the recommendations in our 1996 report.

<u>Recommendation Status</u>	
Implemented	4
Being Implemented	<u>3</u>
Total	7
Source: Compiled by the Legislative Audit Division.	

The most important change the department made is modification of its computerized Project Management System so that it will better accommodate consultant design projects. This change should help the department establish realistic schedules for the completion of consultant designs. This change should also enable the department to better monitor consultant progress and improve its project management procedures. Another important change was the development of an in-house cost estimating form and cost estimation procedures. This will enable the department to improve its estimating and negotiating activities for initial agreements and also give management more information when reviewing contract supplements. The remainder of this memorandum discusses our original recommendations and the status of these recommendations.

Cost Estimates and Negotiations

Prior Recommendation #1

- A. Establish and implement procedures on how cost estimates should be prepared.*
- B. Establish a management review process to review cost estimates before negotiations take place.*
- C. Provide training to project engineers to develop their negotiation skills or use other staff with negotiation experience.*

This recommendation is implemented.

The department has developed a new cost estimate form for use by both CDS staff and the consultants. The form provides for a detailed estimate of the man-hours required for the project. The form includes 21 major categories of activities that a consultant could perform while completing a design project such as field surveys, traffic analysis, and preliminary design. Most of these major categories are further broken down to multiple tasks. In addition, the form provides for tracking man-hours for up to seven types of employees for the consultant which could all have different hourly rates. On the last page of the form, there are categories for nonlabor costs such as vehicle rentals and staff per diem. There are also categories for services the consultant may

choose to subcontract, such as cultural resource studies and right-of-way acquisition. To help the CDS staff compile cost estimates, the department has issued a memo with estimated hourly rates for various types of consultant staff, with estimated costs for nonlabor categories, and with estimated costs for subcontracted work.

Using this standardized format for in-house cost estimates has improved the process for management review. With the consultants using the same form, it has also aided negotiations between CDS staff and consultants. In 1998, CDS staff, along with some other department staff, attended a training class covering negotiation skills.

Evaluation of Consultants

Prior Recommendation #2

Complete formal end-of-project performance evaluations of consultants and maintain the evaluations for future reference.

This recommendation is being implemented.

The department drafted a "Consultant Performance Evaluation" form in December 1998. Comments on this form were requested from department management and selected department staff in January 1999. In the written guidelines accompanying the form, the department has indicated this form and process is designed to document the performance of a consultant on a given contract and to assist the department in the selection of consultants for future projects. An evaluation form is to be completed at least annually and at the end of the project. The form was just being finalized during our review and had not yet been used on any completed consultant projects.

Consider Consultant Location

Prior Recommendation #3

Develop procedures specifying when location will be evaluated and the amount of weight which will be applied to it.

This recommendation is implemented.

When selecting consultants for a project, the department has developed procedures that allow a weighting of up to 5 percent for a consultant's geographic location "depending upon necessity of firms' geographic locations and/or job expertise requirements." The Consultant Design Engineer will determine the proper weight of this category for each project.

When consultants were recently evaluated for several new project awards, we saw evidence that consultant geographic location was considered in the scoring of the consultants.

Consultant Selection for Local Government Projects

Prior Recommendation #4

Establish controls to ensure local governments follow proper consultant selection procedures.

This recommendation is being implemented.

At the time of our follow-up review, the department had requested comments on a draft of its new consultant services procedures. Part of this new draft manual includes procedures for consultant selection. Before the procedures are finalized, the department also plans on getting approval from the Federal Highway Administration. Department officials have indicated these procedures will be mailed to local governments when they are final. We have reviewed the draft policies which include the statement: "In order to qualify for the use of federal-aid money in the funding of consultant engineering services, all government agencies working through or within the Department of Transportation will follow these procedures."

Contract Supplements

Prior Recommendation #5

Establish a control system which requires department management be more involved in reviewing and approving supplements.

This recommendation is implemented.

Processing of contract supplements is covered in the department's new draft procedures manual. The initial approval level for contract supplements is given to the Consultant Design Engineer. The manual also indicates supplements involving major changes in the scope of work or significant increases in original contract amount are to be approved by the department director. In a letter to our office, the department indicated supplements would require management review and approval by the Chief of the Preconstruction Bureau and the Administrator of the Engineering Division. The department also indicated large supplements would be reviewed and approved by the Consultant Selection Board.

Based on our interviews with department officials and review of a small sample of files, it appears supplements are getting more of a management review than in the past. The most in-depth review, including review of cost estimates, is conducted by the Consultant Design Engineer.

Project Management System

Prior Recommendation #6

Use the Project Management System to establish project schedules for consultant designs.

This recommendation is being implemented.

The department has worked with the Consulting Engineers Council of Montana and made some philosophical changes related to how the department will be administering consultant design contracts. As part of these changes, the department has developed a methodology for better incorporating consultant designs into its computerized Project Management System (PMS) which has been used for many years to monitor design projects. The PMS calculates start and finish dates for 225 activities within 70 department work units that can be involved on in-house design projects. At any one time there can be up to 500 projects tracked by the PMS. The computerized process developed for consultant designs involves up to 68 activities. The system will calculate start and finish dates for both consultant activities and department reviews of consultant reports.

The schedule of dates produced by the PMS will become part of the agreement with the consultant. The new Consultant Design Users Manual and Flowchart were completed and distributed to PMS users on February 22, 1999.

The PMS has now been modified so it can generate project schedules for consultant design projects. The department is set to work with consultants to use and adjust this schedule of dates as necessary so the dates can be part of the agreement between the department and a consultant. This final step of incorporating the schedule into the agreements has not been accomplished yet but is planned for future consultant design projects.

Project Management

Prior Recommendation #7

- A. *Implement effective communications among project engineers, other MDT units, and consultants.*
- B. *File consultant design information upon its receipt and/or review.*
- C. *Conduct periodic project status meetings.*
- D. *Conduct management reviews of consultant design projects.*

This recommendation is implemented.

Many of the department's communication needs on consultant design projects are tied to keeping the projects on schedule and coordination between the department and the consultant. This coordination often involves either information being provided by the department to the consultant or reviews of consultant-provided reports. When consultant designs are scheduled using the PMS (recommendation #6) the department and the consultant should be better able to communicate about these coordinated tasks and scheduling needs.

The department has improved its filing of consultant design information. For active projects the department has provided each project engineer with a shelf of stacked compartments. This allows the project engineer to organize the documentation for each project while still maintaining easy access to the information. The department has also provided additional secretarial time to help the project engineers with filing information in the project files.

Department officials have indicated improvements have been made in holding project status meetings and in conducting management reviews of consultant design projects. Our review of project files did not show significant documentation of these meetings and reviews. However, department management confirmed that these procedures are providing an effective means of providing ongoing communication without requiring any excess documentation requirements.

Job #: 99SP-54

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